WHAT IS CLAIMED IS:

1. (previously presented) A protein crystalloid body (forisome) isolated from Fabaceae, wherein the protein crystalloid body has a reversible, anisotropic contractability such that:

the protein crystalloid body becomes thicker in a direction perpendicular to a longitudinal axis of the protein crystalloid body and shorter along said longitudinal axis when increasing a calcium ion concentration in a medium surrounding the protein crystalloid body past a threshold value of approximately 30 nM and the protein crystalloid body becomes thinner in said perpendicular direction and longer along said longitudinal axis when decreasing the calcium ion concentration below the threshold value of approximately 30 nM; and

the protein crystalloid body becomes thicker in said perpendicular direction when increasing a pH value of a medium surrounding the protein crystalloid body to a value above approximately 9.5 without becoming shorter along said longitudinal axis and the protein crystalloid becomes thinner in said perpendicular direction without becoming longer along said longitudinal axis when decreasing the pH value below approximately 9.5;

wherein the protein crystalloid body comprises a first protein and a second protein; and

wherein, when digesting the first and second proteins by trypsin, a peptide Glu-Gly-Phe-Asp-Ile-Ala-Phe-Lys (seq. ID No. 2) is found.

2. (previously presented) The protein crystalloid body according to claim 1, wherein the first protein has a molecular weight in the range of approximately 55-65 kDa and the second protein has a molecular weight in the range of 53-63 kDa.

3. (currently amended) A [[The]] protein crystalloid body ~~according to claim 2,~~ (forisome) isolated from Fabaceae, wherein the protein crystalloid body has a reversible, anisotropic contractability such that:

the protein crystalloid body becomes thicker in a direction perpendicular to a longitudinal axis of the protein crystalloid body and shorter along said longitudinal axis when increasing a calcium ion concentration in a medium surrounding the protein

crystalloid body past a threshold value of approximately 30 nM and the protein crystalloid body becomes thinner in said perpendicular direction and longer along said longitudinal axis when decreasing the calcium ion concentration below the threshold value of approximately 30 nM; and

the protein crystalloid body becomes thicker in said perpendicular direction when increasing a pH value of a medium surrounding the protein crystalloid body to a value above approximately 9.5 without becoming shorter along said longitudinal axis and the protein crystalloid becomes thinner in said perpendicular direction without becoming longer along said longitudinal axis when decreasing the pH value below approximately 9.5;

wherein the protein crystalloid body comprises a first protein and a second protein;

wherein, when digesting the first and second proteins by trypsin, a peptide Glu-Gly-Phe-Asp-Ile-Ala-Phe-Lys (seq. ID No. 2) is found;

wherein the first protein has a molecular weight in the range of approximately 55-65 kDa and the second protein has a molecular weight in the range of 53-63 kDa;

wherein, when digesting the first and second proteins by trypsin, a further peptide Leu-Gln-Asp-Asn-Pro-Gln-Glu-Val-Ile-Lys (seq. ID No. 1) is found; and

wherein the first protein further contains the fragments:

Glu-Val-Thr-Ser-Val (seq. ID No. 3);

VaL-Met-Glu-Val-Ser-Trp-His-Tyr-Lys-(seq. ID No. 4);

Ala-Thr-Asp-Pro- (seq. ID No. 5).

4. (currently amended) The protein crystalloid body according to claim 1, having a length of approximately 1 µm [[m]] to approximately 40 µm [[m]] and a diameter perpendicularly to the length of approximately 1µm [[m]] to approximately 10 µm [[m]].

5. (previously presented) The protein crystalloid body according to claim 4, wherein the first protein has a molecular weight in the range of approximately 55-65 kDa and the second protein has a molecular weight in the range of 53-63 kDa.

6. (previously presented) The protein crystalloid body according to claim 5, wherein, when digesting the first and second proteins by trypsin, a further peptide

Leu-Gln-Asp-Asn-Pro-Gln-Glu-Val-Ile-Lys (seq. ID No. 1) is found;

and wherein the first protein further contains the fragments:

Glu-Val-Thr-Ser-Val (seq. ID No. 3);

VaL-Met-Glu-Val-Ser-Trp-His-Tyr-Lys (seq. ID No. 4);

Ala-Thr-Asp-Pro- (seq. ID No. 5).

7. (previously presented) The protein crystalloid body according to claim 1, wherein the contractibility along the longitudinal axis is up to approximately 30 % accompanied by an expansion perpendicular to the longitudinal axis of up to approximately 100 %.

8. (previously presented) A protein of the protein crystalloid body of claim 2, having a molecular weight in the range of approximately 55-65 kDa, comprising at least one of the sequences (read N-terminal to C-terminal):

Leu-Gln-Asp-Asn-Pro-Gln-Glu-Val-Ile-Lys (seq. ID No. 1);

and

Glu-Gly-Phe-Asp-Ile-Ala-Phe-Lys (seq. ID No. 2).

9. (previously presented A fragment of the protein of claim 8, comprising at least one of the sequences (read N-terminal to C-terminal):

Leu-Gln-Asp-Asn-Pro-Gln-Glu-Val-Ile-Lys (seq. ID No. 1);

and

Glu-Gly-Phe-Asp-Ile-Ala-Phe-Lys (seq. ID No. 2).

10. (previously presented) A protein of the protein crystalloid body of claim 2, having a molecular weight in the range of approximately 53-63 kDa, comprising at least one of the sequences (read N-terminal to C-terminal):

Leu-Gln-Asp-Asn-Pro-Gln-Glu-Val-Ile-Lys (seq. ID No. 1);

and

Glu-Gly-Phe-Asp-Ile-Ala-Phe-Lys (seq. ID No. 2).

11. (previously presented A fragment of the protein of claim 10, comprising at least one of the sequences (read N-terminal to C-terminal):

Leu-Gln-Asp-Asn-Pro-Gln-Glu-Val-Ile-Lys (seq. ID No. 1);

and

Glu-Gly-Phe-Asp-Ile-Ala-Phe-Lys (seq. ID No. 2).

12. (previously presented) A protein of the protein crystalloid body of claim 2, having a molecular weight in the range of approximately 55-65 kDa, comprising the sequences (read N-terminal to C-terminal):

Glu-Val-Thr-Ser-Val (seq. ID No. 3);

Val-Met-Glu-Val-Ser-Trp-His-Tyr-Lys-(seq. ID No. 4);

Ala-Thr-Asp-Pro- (seq. ID No. 5).

13. (original) The protein according to claim 12, further containing at least one of the following amino acid sequences:

Leu-Gln-Asp-Asn-Pro-Gln-Glu-Val-Ile-Lys (seq. ID No. 1);

and

Glu-Gly-Phe-Asp-Ile-Ala-Phe-Lys (seq. ID No. 2).

14. (previously presented) A fragment of the protein of claim 12, comprising the sequences (read N-terminal to C-terminal):

Glu-Val-Thr-Ser-Val (seq. ID No. 3);

Val-Met-Glu-Val-Ser-Trp-His-Tyr-Lys-(seq. ID No. 4);

Ala-Thr-Asp-Pro- (seq. ID No. 5).

15. (original) The fragment according to claim 14, further containing at least one of the following amino acid sequences:

Leu-Gln-Asp-Asn-Pro-Gln-Glu-Val-Ile-Lys (seq. ID No. 1).

and

Glu-Gly-Phe-Asp-Ile-Ala-Phe-Lys (seq. ID No. 2)

16. (withdrawn) A method for isolating protein crystalloid bodies of claim 1, wherein the method comprises the steps of:

A) obtaining phloem of a plant of the family Fabaceae;

B) destroying the cells of the phloem;

C) preparing a suspension of the destroyed cells of step B);

D) filtering the suspension;

E) separating the protein crystalloid bodies from other components of the suspension by gradient centrifugation.

17. (withdrawn) The method according to claim 16, wherein in the step D) a Nycodenz solution is used for gradient centrifugation, wherein in the step C) the suspension contains a medium containing KCl in a suitable buffer.

18. (withdrawn) The method according to claim 16, wherein the plant is selected from the family of Vicia faba.

19. (withdrawn) A method of operating micro tweezers, comprising the steps of:

connecting at least one protein crystalloid body of claim 1 to two opposed spring arms of micro tweezers;

increasing a concentration of calcium ions in a medium surrounding the at least one protein crystalloid body from a value significantly below 30 nM to a value significantly above 30 nM.

20. (withdrawn) A method for operating a display element for a change of a calcium ion concentration from significantly below 30 nM to significantly above 30 nM or for change of the pH value from below pH 9.4 to pH 10.0 in a medium, the method comprising the steps of:

connecting a protein crystalloid body of claim 1 having a suitable size to two opposed spring arms having tips that upon contraction of the protein crystalloid body contact one another, wherein the spring arms and the tips are configured such that when the tips contact one another an electric circuit is closed and electric current flows in the electric circuit;

using the electric current flow or interruption of the electric circuit as a signal for indicating that the calcium ion concentration has increased to a value significantly above 30 nM or has dropped to a value significantly below 30 nM or that the pH value has risen above pH 10.0 or dropped below pH 9.4.